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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/813,837

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Akhil K. Garlapati

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EXAMINER

PATEL, RAJNIKANT B

ART UNIT

PAPER NUMBER

2838

DATE MAILED: 09/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/813,837

Applicant(s)

GARLAPATI ET AL.

Examiner

Rajnikant B. Patel

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-26 and 28-60 is/are pending in the application.
- 4a) Of the above claim(s) 38-54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-26,28-37 and 55-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. As per request of applicant' the finality of previous action is withdrawn here and a new office action is issued here.
2. Applicant's arguments filed 18 September 2006 have been fully considered but they are not persuasive. As explained on the phone Claim 1 was amended and included limitation that was not presented before, and hence the Examiner applied a new art. Though Claim 26 was amended to include limitations of claim 27, since newly applied art did read on the amended claim 26, the Examiner used the same art to reject the claim 26, as applied to rejection of Claim 1. It is agreed that the Examiner could have used previous combination of Sawtell and Koazechi to reject the claim 26, but rather than presenting rejection based on combination of two set of arts, the examiner used a single set of arts.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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5. Claims 26 is rejected under 35 U.S.C. 102(b) as being anticipated by Sawtell (U.S. Patent # 5,949,225).

Sawtell disclose the claimed subject matters a reference voltage generator (figure 1-4), including amplify base current of bipolar transistor (column 1, line 60-69), an absolute temperature (column 9, line 35-45).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-26,28-37 and 55-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawtell (U.S. Patent # 5,949,225) in combination with Koazechi (U.S. Patent # 5,568,045).

In regards to claims 3-9,13-15,21-26,28-37 and 56-60, Sawtell discloses claimed subject matters as explained in the claim 1,26 and 55, except the utilization of the technique for different current density transistor. Koazechi teaches the utilization of the similar technique (Abstract, line 1-10). It would have been obvious one having an ordinary skill in the art at the time the invention was made to modify Sawtell's voltage reference circuit by utilizing the technique taught by Koazechi for the purpose of providing improved reference voltage generator of the band-gap regulator.

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7. Claims 1,20,26,55 and 59-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akioka et al. (U.S. Patent # 5,563,502) in combination with Koazechi (U.S. Patent # 5,568,045).

Akioka et al. disclose the claimed subject matters a voltage reference generator (figures 1-14), including a bipolar transistor configured to amplify a base current (column 5, line 10-20), the base current being proportional to absolute temperature (column 4, line 57-67), a resistor coupled to base of the transistor (figure 2, item R3). However Akioka et al. does not disclose the utilization of the technique for a transistor configured to have different current density. Koazechi teaches the utilization of the similar technique (Abstract, line 1-10). It would have been obvious one having an ordinary skill in the art at the time the invention was made to modify Akioka et al.'s voltage reference circuit by utilizing the technique taught by Koazechi for the purpose of providing improved reference voltage generator of the band-gap regulator.

8. Claims 3 and 7-19, 21-25,28-37 and 56-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akioka et al. (U.S. Patent # 5,563,502) in combination with Koazechi (U.S. Patent # 5,568,045).

Sawtell in combination with Koazechi disclose the claimed subject matters as explained above, except the utilization of the technique for a parabolic function, a low-beta transistor, beta is less than ten, beta is less than five, a power supply is less than 1.7V, the power supply rejection ratio is at least 60db and voltage reference generator is less than the band-gap voltage of silicon. It would have been obvious one having an ordinary

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skill in the art at the time the invention was made to utilize transistor with available beta and power supply as well as absolute temperature function, since it has been held to be within the general skill of a worker in the art to select a known material or range on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshine 125 USPQ 416.

9. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bakker et al. (U.S. Patent # 6,198,267) in combination with Pennock (U.S. Patent # 5,568,045).

Bakker et al. disclose the claimed subject matters a voltage reference generator (figure 1-2), including a bipolar transistor configured to amplify base current of transistor (column 1, line 36-45). Bakker et al. does not disclose the utilization of the technique for a low-beta transistor. Pennock teaches the utilization of the similar technique for a low-beta transistor (column 12, line 1-15). It would have been obvious one having an ordinary skill in the art at the time the invention was made to modify Bakker et al.'s voltage reference circuit by utilizing the technique taught by Pennock for the purpose of providing improved reference voltage generator of the band-gap regulator.

***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rajnikant B. Patel whose telephone number is 571-272-2082. The examiner can normally be reached on 6.30-5.00; m-f.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Rajnikant B Patel  
Primary Examiner  
Art Unit 2838

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